

November 4, 2004

Mr. J. V. Parrish
Chief Executive Officer
Energy Northwest
P.O. Box 968 (Mail Drop 1023)
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - REQUEST FOR ADDITIONAL
INFORMATION (TAC NO. MC3203)

Dear Mr. Parrish:

By letter dated May 19, 2004, Energy Northwest submitted a request for an amendment to Facility Operating License No. NPF-21 to revise Technical Specification 3.8.1, "AC Sources-Operating," to permit a longer completion time for the Division 1 and Division 2 diesel generators for the Columbia Generating Station. The staff has performed an initial review of the amendment request and finds that it needs additional information to complete its review.

Therefore, it is requested that you respond to the enclosed request for additional information by November 29, 2004, for the NRC staff to expedite its review. The response date was agreed upon by members of your staff via telephone conference on October 26, 2004. The enclosed questions are unchanged, except for administrative changes, from those sent by e-mail to a member of your staff on October 13, 2004.

Sincerely,

/RA/

William A. Macon, Jr., Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure: Request for Additional Information

cc w/encl: See next page

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Columbia Generating Station

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REQUEST FOR ADDITIONAL INFORMATION

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

By letter dated May 19, 2004, Energy Northwest submitted a request for an amendment to Facility Operating License No. NPF-21 to revise Technical Specification 3.8.1, "AC Sources-Operating," to permit a longer completion time for the Division 1 and Division 2 diesel generators for the Columbia Generating Station. The following additional information is needed by the staff to complete its review.

1. The 2004 peer review summary results performed in accordance with Regulatory Guide (RG) 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," provide only peer review A and B Facts and Observations (F&O) results. Based on the staff's review of the Columbia Generating Station (CGS) probabilistic risk assessment (PRA), provide the disposition of peer review C F&Os found to be applicable to the proposed diesel generator (DG) completion time (CT) extension to 14 days.
2. Clarify or justify the reactor core isolation cooling (RCIC) system logic used. If the logic is in error, please revise the model and provide updated results for this application (base CDF, LERF, and Δ CDF, Δ LERF, OCCDP, and ICLERP). (Gate GHPS212 identified during the staff review of the CGS PRA).
3. Provide the installation schedule for the permanent alternate AC (AAC) power source and the associated timeframe requested for crediting the temporary AAC power source. Will the temporary AC power source remain an option after the permanent AC power source is installed? Clarify if the analysis credits the permanent AACSBG [alternate AC source to the Division 1 and Division 2 battery chargers] and for what timeframe the temporary AC power source will be credited for the proposed 14-day CT. The staff considers the schedule for the permanent installation should be identified as a commitment by the licensee.
4. Attachment 1 to the submittal states that procedures for verifying the AACSBG DG is capable of performing its risk management function, including starting and loading, and will be performed prior to declaring the AACSBG available. How is the verification of the temporary/permanent AACSBG availability accomplished? Is this an additional risk management action commitment? Is the temporary/permanent DG only considered available at 72 hours?
5. Maintenance and repair appear to be treated the same. The proposed CT extension does not appear to distinguish between corrective maintenance and preventive maintenance. Are the estimates for Δ CDF, Δ LERF, ICCDP and ICLERP calculated for both preventive maintenance and repair (corrective maintenance)? Is the 72-hour

limiting condition for operation (LCO) assumed to remain intact? Does the evaluation assume only the extension from 72 hours to 14 days? Is the 24-hour technical specification (TS) common cause evaluation included in the results?

6. For the equations on page 5 of Attachment 5, please provide a reference for the derivation.
7. Battery mission times assume battery testing complete/successful with elimination of margin for the proposed 14 day CT extension (i.e., battery capacity equal to or greater than 100% capacity - 6 hour basis for batteries). Is this a risk management action commitment? In addition, is a load shed required for 125 Vdc or 250 Vdc loads to support the 6 hour battery assumption?
8. Provide a discussion on the cumulative risk for the proposed CT extension with respect to previous CGS license amendment requests submitted to the staff for review and approval.
9. The 2004 peer review was not a 100 percent review, but a selective sampling. What systems applicable to the proposed CT extension were reviewed and what systems were not reviewed? Additionally, if the review resulted in a graded capability 1 for the supporting requirement with specific aspects to be upgraded, how are the required upgrades identified?

As stated in RG 1.200, the team qualifications determine the credibility and adequacy of the peer reviewers. To avoid any perception of a technical conflict of interest, the peer reviewers will not have performed any actual work on the PRA. Discuss the independence of the peer review team members with respect to the guidelines given in RG 1.200.

10. In Attachment 6, is the switchgear room cooling confirmed to be met for the proposed 6 hour mission time?
11. On page 22 of Attachment 5 it is stated that the AACSBBC will be pre-staged with required cabling and distribution boards in place for rapid connection. Does this refer to either the temporary or permanent AACSBBC?
12. For the permanent installation of the AACSBBC, the submittal states that the installation will comply with CGS's separation criteria. Provide an evaluation of the conformance of this installation to the requirements of IEEE 279 (10 CFR 50.55a (h)) and IEEE 308 with respect to channel independence, separation, interaction and single failure.
13. Is the temporary/permanent AACSBBC to be included in the 10 CFR 50.65(a)(2) Maintenance Rule? Will the AACSBBC have established performance criteria? If so please identify the performance criteria for the AACSBBC.
14. Provide the DG unavailability goals and reliability criterion (functional failures) and comparatives to the estimates used in the CGS PRA.
15. For the sensitivity studies performed, were collective effects evaluated (instead of

separate) for individual components/events? Integrated impact? What are the effects resulting from the worst case considerations of all the sensitivity studies?

16. The AAC source described in the submittal is not a qualified AAC source to support the request because it does not have enough capacity to power safe shutdown loads. In the past, the staff has granted extensions in allowed outage time for DGs to those licensees who have installed a qualified AAC credited for station blackout (SBO) events which can be substituted for an inoperable DG in the event of a loss of offsite power (LOOP). Also, some boiling water reactor licensees have taken credit for the Division III DG which can be cross-connected to either Division I or Division II AC buses to provide an alternate source of power for an SBO or in the event of a LOOP when one DG is in the extended outage and the other DG becomes unavailable. This cross-connection can be accomplished within two hours. These licensees have demonstrated that when the Division III DG is cross-connected to the Division I or II bus, it can carry all of the Division I or II automatically connected loads with the exception of certain loads. Some licensees have installed a temporary commercial-grade DG capable of supplying power to, at a minimum, the required safe-shutdown loads on the DG train removed from service for the maintenance outage.

In view of the above, should Energy Northwest elect to utilize the Division III DG as an alternate power source, please provide the following additional information:

- a. Is this going to be a permanent cross-connection? How long would it take to accomplish this connection?
 - b. Demonstrate that the Division III DG has enough capacity to power loads that are needed for an SBO and a LOOP.
17. What type of communication has been established between the control room operator of CGS and the system load dispatcher? Did Energy Northwest obtain current grid conditions information from the dispatcher prior to maintenance on the DG? Is the dispatcher notified in advance that the DG is going to be out for an extended period of time?
 18. Clarify if there are any seasonally based or other restrictions on DG maintenance. Provide clarification as to what is meant by severe weather and the actions to be taken.
 19. Attachment 7 to the submittal lists risk management commitment actions for the extended CT. The staff considers the following measures need to be added:
 - a. The condition of the offsite power supply, switchyard and the grid will be evaluated prior to entering the extended CT for elective maintenance. An extended CT will not be entered to perform elective maintenance when grid stress conditions are high such as during summer temperatures and/or high demand.

- b. No maintenance or testing that affects the reliability of the trains associated with the operable DGs will be scheduled during the extended CT. If any testing and maintenance activities must be performed while the extended CT is in effect, a 10 CFR 50.65(a)(4) evaluation will be performed.
- c. The system load dispatcher will be contacted once per day and informed of the DG status along with the power needs of the facility.